AMENDMENTS TO THE CLAIMS

Please incorporate the following amendments into the subject application.

In the Claims:

1.   (Previously Presented)   A method for array design, comprising:

(a)   selecting, by a customer, at least one array design parameter and at least one gene of interest;

(b)   providing said at least one customer selected array design parameter and said at least one gene of interest to a vendor;

(c)   curating, by said vendor, a sequence for said at least one gene of interest;

(d)   selecting, by said vendor, at least one probe specific for said curated sequence;

(e)   providing, by said vendor, at least one additional array design parameter; and

(f)   completing at least one array design using said at least one customer selected array design parameter, said at least one vendor selected probe, and said at least one vendor provided array design parameter.

2.   (Original)   The method of claim 1, wherein said completing is carried out by said vendor.

3.   (Original)   The method of claim 1, wherein said completing is carried out by said customer.

4.   (Previously Presented)   The method of claim 1, wherein said array design is for a nucleic acid array.

5.   (Previously Presented)   The method of claim 1, wherein said at least one customer selected array design parameter comprises layout parameters.

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6.   (Previously Presented)   The method of claim 1, wherein said at least one customer selected array design parameter comprises probe parameters.

7.   (Previously Presented)   The method of claim 1, wherein said at least one customer selected array design parameter comprises control probe parameters.

8.   (Original)   The method of claim 1, further comprising generating a visual interface for said customer, said visual interface providing a display with parameter selection options for said selecting.

9.   (Previously Presented)   The method of claim 8, wherein said generating said visual interface further comprises generating a visual display of an array layout for said customer, which visual display includes said at least one customer selected array design parameter.

10.   (Previously Presented)   The method of claim 9, further comprising reviewing, by said customer, said at least one customer selected array design parameter, as shown on said visual display of said array layout.

11.   (Previously Presented)   The method of claim 9, further comprising revising, by said customer, said at least one customer selected array design parameter.

12 - 21. (Canceled)

22.   (Previously Presented)   A gene-based array design system, comprising:

(a)   means for selecting, by an array customer, at least one gene of interest;

(b)   means for providing said at least one customer selected gene of interest to a vendor;

(c)   means for curating, by said vendor, sequence information for said at least one customer selected gene of interest;

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(d)   means for selecting, by said vendor, a plurality of nucleic acid probes specific for said customer selected gene of interest; and

(e)   means for completing at least one array design that includes at least one of said vendor selected nucleic acid probes specific for said customer selected gene of interest.

23 - 26. (Canceled)

27.   (Previously Presented) A method for gene-based array design, comprising:

(a)   selecting, by a customer, at least one gene of interest;

(b)   providing said at least one customer selected gene of interest to a vendor;

(c)   curating, by said vendor, sequence information for said at least one customer selected gene of interest;

(d)   selecting, by said vendor, a plurality of nucleic acid probes specific for said at least one customer selected gene of interest; and

(e)   completing at least one array design that includes at least one of said vendor selected nucleic acid probes specific for said at least one customer selected gene of interest.

28.   (Previously Presented) The method of claim 27, further comprising fabricating said at least one designed array.

29 - 30. (Canceled)

31.   (Previously Presented) The method of claim 27, wherein said completing is carried out by said vendor.

32.   (Previously Presented) The method of claim 27, wherein said completing is carried out by said customer.

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33.   (Previously Presented) The method of claim 27, further comprising selecting, by said customer, other array design parameters.

34.   (Previously Presented) The method of claim 33, wherein said other customer selected array design parameters comprise layout parameters.

35.   (Previously Presented) The method of claim 33, wherein said other customer selected array design parameters comprise probe parameters.

36.   (Previously Presented) The method of claim 33, wherein said other customer selected array design parameters comprise control probe parameters.

37.   (Previously Presented) The method of claim 27, further comprising generating a visual interface for said customer, said visual interface providing a display with parameter selection options for said selecting.

38 – 40. (Canceled)

41.   (Previously Presented) The method of claim 28, wherein said array fabrication is in-situ array fabrication.

42.   (Previously Presented) The method of Claim 1, wherein said curating comprises checking the sequence for errors, removal of commonly repeated subsequences, and/or removal of any artifacts associated with sequence assembly.

43.   (Previously Presented) The method of Claim 22, wherein said curating comprises checking the sequence for errors, removal of commonly repeated subsequences, and/or removal of any artifacts associated with sequence assembly.

44.   (Previously Presented) The method of Claim 27, wherein said curating comprises checking the sequence for errors, removal of commonly repeated subsequences, and/or removal of any artifacts associated with sequence assembly.

45.   (Canceled)

46.   (Currently Amended) The method of Claim 45 <u>1</u>, wherein said ~~curation~~ <u>curating</u> comprises ~~said~~ checking the sequence for errors, removal of commonly repeated subsequences, and/or removal of any artifacts associated with sequence assembly.

47.   (Currently Amended) The method of Claim 46 <u>1</u>, wherein said ~~curation~~ <u>curating</u> comprises checking the sequence for errors.

48.   (Currently Amended) The method of Claim 46 <u>1</u>, wherein said ~~curation~~ <u>curating</u> comprises said removal of commonly repeated subsequences.

49.   (Currently Amended) The method of Claim 45 <u>1</u>, wherein said ~~curation~~ <u>curating</u> comprises removal of any artifacts associated with sequence assembly.

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